TowerJazz and Triune Systems Announce nanoSmart® Products Ramping to Mass Production, More Energy Saving Products to be Launched in 2012

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nanoSmart® Enables Numerous Systems to Eliminate Standby Power, Increasing Battery Life and Reducing Carbon Footprint

Energy Harvesting Device Market Projected to Grow Exponentially; 10B+ Devices Forecast to Ship by 2019, a 20x Increase over ~500 Million Units Shipped in 2009

NEWPORT BEACH, Calif. & RICHARDSON, Texas--(BUSINESS WIRE)--Jan. 31, 2012-- TowerJazz, the global specialty foundry leader, and Triune Systems LLC, an IC design and test development provider, today announced that Triune has developed a proprietary analog/power management technology using the TowerJazz TS35PM process on its state of the art 0.18um based power management platform. Triune has trademarked this energy saving green technology, called nanoSmart®, and is releasing two products currently ramping to volume production showcasing this technology, the TS14001 and TS12001.

Triune TS14001 (Photo: Business Wire)

Triune's TS14001 is an ultra-low-power LDO regulator which provides regulated output with best-in-class ultra-low quiescent current losses of 20nA under no-load conditions which helps reduce energy and heat. The TS12001 is an ultra-low-power under voltage load protect switch that utilizes off-active™ technology. Off-active™ provides active control of turning off, and then on, the control of the load with only 200pA losses, increasing efficiencies and resulting in less power wasted. In addition to these two products, several more energy saving products are planned to be launched this year to meet growing market demands. According to IDTechEx, the energy harvesting device market is projected to grow exponentially this decade; 10B+ energy harvesting devices are forecast to ship by 2019 – a 20x increase over ~500 million units that shipped in 2009.

nanoSmart® technology has been designed to target portable and low power applications for the consumer, industrial and medical markets as well as energy harvesting systems, off-grid autonomous systems such as solar panels for electricity, and SmartCard applications. Advantages of nanoSmart® technology include ultra-low power loss for light load conditions, flexibility to work with a wide range of output loads, and a minimized bill of materials (BOM) while still providing high-efficiency operation. Triune's nanoSmart® and MPPT-lite™ technologies have also been leveraged for novel portable solar harvesting solutions through a National Science Foundation small business innovation and research (SBIR) grant award (No. 1113400). In addition, nanoSmart® technology can eliminate standby power losses for many systems and extend battery life on portable products. It expands the utility of alternate energy harvesting sources such as micro-solar and enables new autonomous systems.

"We chose to develop this ultra-low power technology for analog and power management applications with TowerJazz because they offered the best process for our needs, and were willing to work with us on differentiated out-of-the-box solutions," said Ross Teggatz, President of Triune Systems. "Our nanoSmart® technology further leverages TowerJazz's processes to provide truly unique solutions that can virtually eliminate the carbon footprint of any product while in standby mode, and we look forward to developing several new and exciting products around this."

"TowerJazz continually draws on our customers' needs to drive our technology offerings. And, the fact that power management experts such as Triune's engineers chose TowerJazz's power platform is proof of our technology superiority. Triune has been a valued partner for several years and their inputs have contributed to the best-in-class power management technology we have today. The device performance capability of nanoSmart® demonstrates what cooperation and flexibility can achieve in implementing new ideas," said Dr. Avi Strum, Vice President and General Manager of the Specialty Business Unit at TowerJazz.

TowerJazz will be exhibiting at APEC 2012 on February 6-9 in booth #203 and will be presenting its 700v IC technology for LED lighting and its ultra-low Rdson device solutions used in Triune's energy harvesting design in a session on February 7 at 2:15 pm – 2:45pm.

About Triune Systems

Triune Systems LLC, founded in 2006, is a privately-held company that designs, tests, manufactures, and markets analog and mixed-signal integrated circuits (ICs) specializing in power management, signal conditioning and System-on-Chip (SoC) devices. The Company's highly seasoned and experienced IC development team leverages fabless production and strong supply chain partnerships to provide customers with differentiated products with the best performance, price and value. Triune Systems' world-class team has over 200 years of semiconductor experience and over 70 patents in the areas of semiconductor devices, ESD, analog circuits, and high voltage system architecture that have been used in the consumer, industrial, automotive and medical market segments. For more information, please visit www.triunesystems.com.

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), its fully owned U.S. subsidiary Jazz Semiconductor Ltd., and its fully owned Japanese subsidiary TowerJazz Japan, Ltd., operate collectively under the brand name TowerJazz, the global specialty foundry leader. TowerJazz manufactures integrated circuits with geometries ranging from 1.0 to 0.13-micron, offering a broad range of customizable process technologies including: SiGe, BiCMOS, Mixed-Signal and RFCMOS, CMOS Image Sensor, Power Management (BCD), and Non-Volatile Memory (NVM) as well as CMOS and MEMS capabilities. TowerJazz also offers a world-class design enablement platform that complements its sophisticated technology and enables a

quick and accurate design cycle. In addition, TowerJazz provides (TOPS) Technology Optimization Process Services to IDMs as well as fabless companies that need to expand capacity, or progress from an R&D line to a production line. To provide multi-fab sourcing, TowerJazz maintains two manufacturing facilities in Israel, one in the U.S., and one in Japan with additional capacity available in China through manufacturing partnerships. For more information, please visit www.towerjazz.com.

Safe Harbor Regarding Forward-Looking Statements

This press release includes forward-looking statements, which are subject to risks and uncertainties. Actual results may vary from those projected or implied by such forward-looking statements. A complete discussion of risks and uncertainties that may affect the accuracy of forward-looking statements included in this press release or which may otherwise affect TowerJazz's business is included under the heading "Risk Factors" in Tower's most recent filings on Forms 20-F, F-3, F-4 and 6-K, as were filed with the Securities and Exchange Commission (the "SEC") and the Israel Securities Authority and Jazz's most recent filings on Forms 10-K and 10-Q, as were filed with the SEC, respectively. Tower and Jazz do not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

Photos/Multimedia Gallery Available: http://www.businesswire.com/cgi-bin/mmg.cgi?eid=50151047&lang=en

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